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ENSAFE INC.

ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

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April 27, 1999

Commanding Officer  
Attn: Mark Taylor/1861MT  
SOUTHNAVFACENGCOM  
2155 Eagle Drive  
P.O. Box 190010  
North Charleston, SC 29419-9010

Subject: CTO-094; NSA Mid-South RFI, Millington, Tennessee

Document Transmittal - *MAG-41 Gray Area Investigation Report, Rev. 2, April 27, 1999*

Reference: Contract N62467-89-D-0318 (CLEAN II)

Dear Sir:

Please find enclosed one copy of the *MAG-41 Gray Area Investigation Report, Revision 2*, which incorporates BRAC Cleanup Team (BCT) comments on Revision 1 of the document. As requested, copies have been distributed to the BCT and others as shown on the attached NSA Mid-South RFI Distribution List. Included are both green and white covers/spines, new text, and one new appendix (Appendix C - *General Human Health Risk Assessment Approach for NSA Memphis*). These items should be inserted into the binder provided with Revision 1. The green cover/spine is provided to replace the white ones upon BCT approval of the document.

If you have any questions or comments of a technical nature, please contact me at 901/372-7962. Comments or questions of a contractual nature should be directed to Debra Blagg at 901/386-9344.

Sincerely,

EnSafe Inc.

By: Lawson M. Anderson, CHMM  
Task Order Manager

Enclosures: As Stated

cc: Contracts File: CTO-094 (w/out enclosure)  
Project File: 0094-001-12-240-00 (w/out enclosure)  
SOUTHDIIV: Ms. Kim Reavis/Code 0233KR (w/out enclosure)  
Administrative Record (Sandra Maclin)  
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## NSA Mid-South RFI Distribution List

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Document Date:	April 27, 1999		
Distribution Date:	April 27, 1999		
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			10

**RESPONSE TO WRITTEN USEPA COMMENTS FOR THE  
MAG-41 GRAY AREA INVESTIGATION REPORT, REVISION: 1  
NAVAL SUPPORT ACTIVITY MID-SOUTH, MILLINGTON, TENNESSEE**

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**Comment**

Page 24, line 12 - States "Both are less than the SSLs". Benzene is one but I'm not sure what the other contaminant is.

**Response**

This was an error in the text and it has been corrected so that only benzene is being discussed.

**Comment**

Page 29, line 5 - States "future-worker assessment is considered protective of both current site use and future construction/maintenance events." This is correct for exposure to surface soils; however, the future worker does not consider exposure to subsurface soils which would be expected in a construction scenario. Therefore, a construction worker exposure should also be calculated.

**Response**

It is agreed that the construction worker exposure to subsurface soil is a viable route of exposure. However, as documented in Tables 2 and 5, there were no organic or inorganic contaminants of potential concern identified for subsurface soil. Therefore, cumulative cancer risk was not applicable and not addressed in the PRE.

**Comment**

Page 33, line 2 - I am not aware of an EPA policy accepting  $1E-3$  cancer risk for As. Please provide more specifics on this policy. I believe the MCL for As, which is based on treatment technology, equates to a  $1E-3$  risk. This, however, does not apply to soils.

## **Response**

This statement was made based on information provided in the Risk Assessment Forum's *Special Report on Ingested Inorganic Arsenic: Skin Cancer; Nutritional Essentiality* (USEPA, 1988). In this document, then EPA administrator Lee M. Thomas endorsed the EPA Risk Assessment Council's comments and guidance for agency decisions on arsenic-related skin cancer. Mr. Thomas' recommendations which were based on the Risk Assessment Council's review of the report were:

- Risks of skin cancers associated with the ingestion of inorganic arsenic be estimated using a cancer potency (slope factor) of  $5 \times 10^{-5} \text{ (mg/L)}^{-1}$ , derived in the Forum's Report.
- In reaching risk management decisions in a specific situation, risk managers must recognize and consider the qualities and uncertainties of risk estimates. The uncertainties associated with ingested inorganic arsenic are such that estimates could be modified downwards as much as an order of magnitude, relative to risk estimates associated with most other carcinogens. In such instances, the management document must clearly articulate this fact and state the factors that influenced such a decision.

The second bullet in the text of the document will be modified as follows:

- Based on available toxicological and epidemiological studies on carcinogenic risk from ingestion of arsenic, cancer risk for arsenic can be modified by an order of magnitude by adjusting the acceptable risk range from  $1\text{E-}6$  to  $1\text{E-}4$  down to  $1\text{E-}5$  to  $1\text{E-}3$  (USEPA, 1988).

The full reference for the Risk Assessment Forum document is:

USEPA. (1988). *Special Report on Ingested Inorganic Arsenic — Skin Cancer; Nutritional Essentiality* (EPA/625/3-87/013). USEPA, Risk Assessment Forum, July 1988.

#### **Comment**

Page 33, line 4 - States that the BCT has decided to use deed restrictions on the Northside. The BCT did agree to some form of land use restrictions: however, we have not agreed on the mechanism. I believe the lawyers are still looking at the implementation plan for institutional controls.

#### **Response**

The text was changed to the following:

"The BCT has agreed to some form of land use restrictions on the Northside of NSA Mid-South (i.e., non-residential zoning, prohibiting the use of loess and fluvial deposits groundwater). However, the implementation plan for institutional controls is still being evaluated."